

REMARKS

I. Status of Claims

Claims 1, 25, 28, 38, 39, and 43-58 are pending and subject to examination in this application. No amendment is made herein.

II. Rejections under 35 U.S.C. § 103

The Office has maintained the following rejections of claims 1, 3, 18, 25, 28, 38, 39, and 43-58 under 35 U.S.C. § 103 for the reasons of record:

(1) rejection of claims 1, 25, 28, 38, 39, and 43-58 over U.S. Patent No. 5,482,704 to Sweger et al. ("Sweger") in view of U.S. Patent No. 6,010,689 to Matsumoto et al. ("Matsumoto") and U.S. Patent No. 5,876,705 to Uchiyama et al. ("Uchiyama"); and

(2) rejection of claims 1, 25, 28, 38, 39, and 43-58 over U.S. Patent No. 4,954,335 to Janchipraponvej ("Janchipraponvej") in view of Sweger, Uchiyama, and U.S. Patent No. 6,210,689 to Martino et al. ("Martino") for the reasons of record. Final Office Action, pages 2-5.

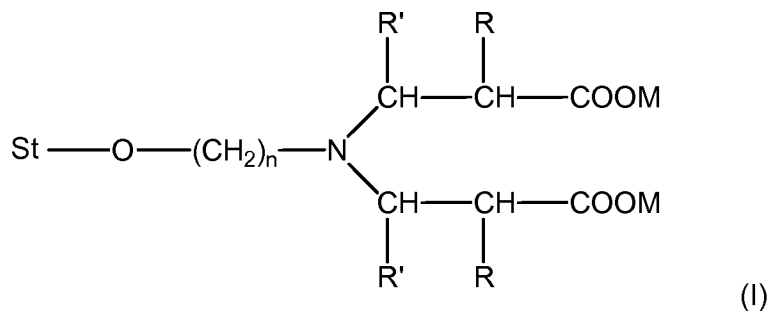
Applicants respectfully traverse these rejections for the reasons of record and additional reasons as set forth below.

A. Sweger in view of Matsumoto and Uchiyama

The current claim 1 reads:

A cosmetic composition, comprising in a cosmetically acceptable medium:

a) at least one amphoteric starch chosen from the compounds of formula (I):



wherein:

St-O is a starch moiety,

R, which may be identical or different, are each chosen from a hydrogen atom and a methyl group,

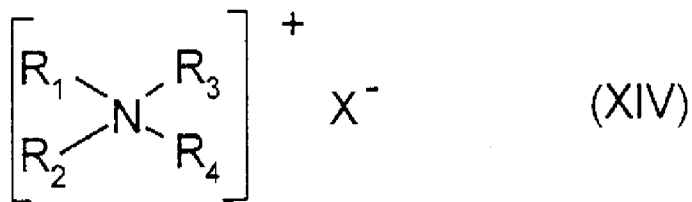
R', which may be identical or different, are each chosen from a hydrogen atom, and a methyl group,

n is chosen from integers ranging from 2 to 3,

M, which may be identical or different, are each chosen from a hydrogen atom, an alkali metal, an alkaline-earth metal, NH₄, quaternary ammonium compounds, and organic amines; and

b) at least one cationic conditioner chosen from cationic silicones and quaternary ammonium salt surfactants chosen from:

1) quaternary ammonium salts of formula (XIV):



wherein:

- X^- is an anion chosen from halides, (C_2-C_6) alkyl sulfates, phosphates, alkyl sulfonates, alkylaryl sulfonates, and anions derived from organic acids,

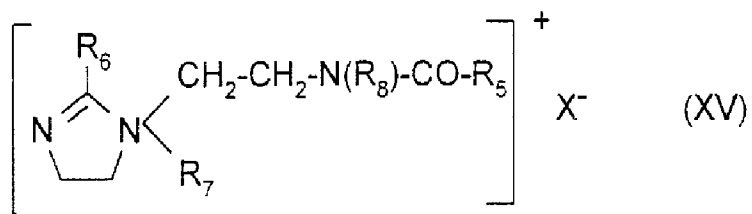
i) - the radicals R_1 , R_2 , and R_3 , which may be identical or different, are independently chosen from linear and branched aliphatic radicals comprising from 1 to 4 carbon atoms, optionally comprising hetero atoms and aromatic radicals, and

- R_4 is chosen from linear and branched alkyl radicals comprising from 16 to 30 carbon atoms;

ii) - the radicals R_1 and R_2 , which may be identical or different, are independently chosen from linear and branched aliphatic radicals comprising from 1 to 4 carbon atoms, optionally comprising hetero atoms, and aromatic radicals, and

- R_3 and R_4 , which may be identical or different, are independently chosen from linear and branched alkyl radicals comprising from 12 to 30 carbon atoms, wherein said radicals further comprise at least one function chosen from ester functions and amide functions; and

2) quaternary ammonium salts of imidazolinium of formula (XV):



wherein:

- R_5 is chosen from alkenyl and alkyl radicals comprising from 8 to 30 carbon atoms,

- R₆ is chosen from a hydrogen atom, C₁-C₄ alkyl radicals, alkenyl radicals comprising from 8 to 30 carbon atoms, and alkyl radicals comprising from 8 to 30 carbon atoms,

- R₇ is chosen from C₁-C₄ alkyl radicals,

- R₈ is chosen from a hydrogen atom and C₁-C₄ alkyl radicals, and

- X⁻ is an anion chosen from halides, phosphates, acetates, lactates, alkyl sulfates, alkyl sulfonates, and alkylaryl sulfonates.

Sweger is directed to a cosmetic composition, which contains amino-multicarboxylate starch derivatives to provide thickening and emulsion stabilization and exhibits good appearance and feel to the skin. Sweger, col. 1, lines 33-36. Sweger also broadly teaches that “[v]arious other ingredients and additives may be included in one or both of the oil and water phases in the cosmetic skin care emulsions” and further provides a laundry list of potential additives in column 5, lines 22-27. However, as the Office admits, Sweger does not teach “the other ingredients in the [claimed] hair composition, such as conditioning agent behenyltrimethylammonium, or anionic surfactant alky ether sulfate.” Final Office Action, page 2. To remedy this deficiency, the Office relies on Matsumoto and Uchiyama and contends that “it would have been prima facie obvious to a person of ordinary skill in the art . . . to use hair conditioning agents, and surfactants because those are well known essential ingredients normally used for hair compositions.” *Id.* at 3. Applicants respectfully disagree, because the Office has provided no basis in the art as to why one skilled in the art would have been motivated to combine the specific elements identified in the prior art at issue to arrive at

the present invention obvious and, therefore, has failed to establish a *prima facie* case of obviousness.

Matsumoto is directed to a hair treatment composition containing particular types of amidopolyether functional silicones, which can generate certain conditioning benefits and are supposed to avoid some disadvantages associated with incorporating other silicones in hair treatment compositions, such as discoloration, which may come about after prolonged storage. See Matsumoto, col. 1, lines 5 to 35. Matsumoto generally teaches that its shampoo compositions can contain cleansing surfactants selected from anionic, nonionic, amphoteric and zwitterionic surfactants, and mixtures thereof. *Id.* col. 2, lines 20-23. Matsumoto also teaches that its compositions can further contain a cationic deposition polymer (col. 3, lines 36 to col. 5, lines 26) or a cationic surfactant (col. 5, lines 29 to col. 6, lines 25) as a conditioning agent.

Uchiyama states that it has surprisingly found stable shampoo compositions having good cleansing and conditioning ability without leaving the hair feeling soiled or coated (see Uchiyama col. 1, lines 55-56), utilizing specific percentages of (1) a deterative surfactant selected from the groups consisting of anionic surfactants, nonionic surfactants, amphoteric surfactants, and zwitterionic surfactants; (2) a fatty compound; (3) a hair conditioning agent selected from nonvolatile dispersed silicone conditioning agents, hydrocarbon conditioning agents, water soluble cationic polymeric conditioning agents, and cationic surfactants; and (d) water. See *id.* col. 2, lines 23-44.

To the extent that Matsumoto or Uchiyama discloses various types of conditioning agents or cleaning surfactants for a hair composition, both Matsumoto and Uchiyama specifically teach that those ingredients need to be combined with other

specific ingredients (i.e. a particular type of functional silicones in Matsumoto or fatty compounds and water in Uchiyama) to yield beneficiary results. There is simply no reasonable expectation that these conditioning agents or cleaning surfactants would provide beneficial results when isolated from the required components disclosed in either Uchiyama or Matsumoto and combined with another ingredient that was not taught by either Uchiyama or Matsumoto (i.e. amphoteric starch taught in Sweger).

Furthermore, the Office has failed to provide any reason why a skilled artisan would have specifically picked and chosen the cationic surfactants as recited in claim 1 of the instant application among various conditioning agents disclosed in either Uchiyama or Matsumoto. In *Takeda Chem. Indus., Ltd. v. AplhaPharm Pty., Ltd.*, 83 USPQ2d 1169, 1174 (Fed. Cir. 2007), the Federal Circuit recently stressed that the teaching, suggestion, or motivation (“TSM”) test retains a role in the obviousness calculus. The Court states that “[a]s long as the [TSM] test is not applied as a ‘rigid and mandatory’ formula, that test can provide ‘helpful insight’ to an obviousness inquiry. *Id.* (quoting *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1731 (2007).) Moreover, the Federal Circuit stated that the Supreme Court in *KSR* “acknowledged the importance of identifying ‘a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in a way the claimed new invention does’ in an obviousness determination.” *Id.* Furthermore, the Federal Circuit subsequently held that proper support for a Section 103 rejection in the chemical arts requires the prior art to supply a reason or motivation to make the claimed compositions. *Aventis Pharma. Deutschland GmbH v. Lupin Ltd.*, 84 USPQ 2d 1197, 1204 (Fed. Cir. 2007) (emphasis added) (citing *Takeda*, 83 USPQ2d at 1174).

Here, as set forth above and for the reasons of the record, Sweger, Matsumoto, or Uchiyama alone or in combination, provides no reason that would have motivated one of the skilled in the art to arrive at the claimed invention by combining (1) at least one amphoteric starch of formula (I) and (2) at least one cationic conditioner chosen from cationic silicones and quaternary ammonium salt surfactants chosen from formula (XIV) and (XV), as recited in current claim 1 of the present application. Therefore, the Office has not established a *prima facie* case of obviousness. Withdrawal of the rejection is respectfully requested.

Independently, the concurrently-filed Declaration of Frederic WOODLAND under 37 C.F.R. § 1.132 ("Woodland Declaration") establishes unpredictability, demonstrating that there is no presumption that all conditioning agents in combination with an amphoteric starch of formula (I) would result in similar properties.

Specifically, the Woodland Declaration has three compositions of claim 1 containing a claimed cationic surfactant (i.e. in Table 1, behenyltrimethyl ammonium chloride (Genamin KDMF from Clariant), which is a quaternary ammonium salt of formula XIV; in Table 2, polydimethyl/methyl aminoethyl aminopropyl siloxane (SME 253), which is a cationic amino silicone; and in Table 3, methyl alkyl alkylamidoethyl imidazolinium Methylsulfate-Quaternium -87 (Varisoft W 575 PG from Evonik Goldsehmidt), which is a quaternary ammonium salt of formula XV). Each of the three Inventive compositions having been compared versus a Comparative composition having hydroxypropyl guar trimethyl ammonium chloride (Jaguar C12 S from Rohida) (which is not the claimed cationic surfactant but is disclosed in Matsumoto, col. 6, lines 9-27, as a particularly suitable type of cationic deposition polymers; and in Uchiyama,

col. 19, lines 16-19, as one of the water soluble cationic polymeric conditioning agents). The results of the three comparisons indicate that the inventive compositions lead to statistically significantly unexpected and improved suppleness and ease of disentanglement of the hair, in comparison to the Comparative composition that contains a conditioning agent disclosed in both Uchiyama and Matsumoto.

In other words, the Office tried to build a *prima facie* case of obviousness based on a presumption of similar properties between the various conditioning agents set forth in the prior art. Applicants' view is that nothing in the prior art would have led one skilled in the art to pick and choose components from the prior art with any reasonable expectation that the choices would make any difference in result.

The Woodland Declaration provides evidence of three cases where the presumption of similar properties is exploded completely, undermining the existence of any *prima facie* case. Hence, no matter what other comparative tests might show, Applicants have established, at a minimum, unpredictability and that there is no basis in fact for assuming that similar properties always exist between the cationic conditioners of the prior art.

Notably, at this stage of the prosecution, Applicants do not assert that they have rebutted any *prima facie* case of obviousness. To the contrary, Applicants have demonstrated that such a *prima facie* case was never established by the Office. Accordingly, Applicants respectfully request that the Office withdraw that rejection.

B. Janchipraponvej in view of Sweger, Uchiyama, and Martino

Janchipraponvej is directed to a clear hair-treating composition comprising a quaternary ammonium compound. Janchipraponvej, col. 1, lines 10-13 (emphasis added). Janchipraponvej states that:

although conditioning compositions for application to freshly shampooed hair are well known, new and improved conditioning formulations based on cationic compounds are continually sought. For example, the majority of present-day commercial hair-conditioner compositions are emulsion-type products that leave too great of a conditioning compound residue on the hair. Consequently, the present invention is directed to a new, **non-emulsified, clear hair-conditioning** composition comprising a combination of suitable hair-conditioning ingredients that is esthetically acceptable to consumers, improves the wet combining and drying properties of hairs, and also leaves the dry hair with satisfactory cosmetic properties and physical properties . . .

Id. col. 2, line 63 to col. 3, line 9 (emphasis added).

As Janchipraponvej teaches, although cationic compounds are well known in the art, there is still a continuous search for “new” and “improved” formulations (compositions) based on those known compounds. In other words, just because cationic compounds are known in the art does not mean that any newly developed formulations comprising the known cationic compounds would have been obvious to one of the skilled in the art.

Janchipraponvej specifically teaches that its hair-conditioning composition has to be non-emulsified and clear. Janchipraponvej also states that its composition can be thickened; however, Janchipraponvej is completely silent about using an amphoteric starch as a thickener. See *id.* col. 16, lines 9-20. To remedy this deficiency, the Office asserts that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions of Janchipraponvej by the

addition of amphoteric starches as taught by Sweger . . .” Final Office Action, page 5. Applicants respectfully disagree for the reasons of the record and for the following additional reasons.

To begin, in making the rejection, the Office again fails to meet the standards outlined by the Supreme Court in KSR, where the Court “identified a number of rationales to support a conclusion of obviousness which are consistent with the proper ‘functional approach’ to the determination of obviousness as laid down in *Graham*.” *Id.* (emphasis in original). For example, the Office fails to demonstrate that (1) there is some reason to modify Janchipraponvej in order to arrive at the claimed invention; and (2) there is a reasonable expectation of success by modifying Janchipraponvej as suggested in the Office Action.

To the contrary, as Applicants have repeatedly discussed in detail on the record, the alleged combination of Janchipraponvej with Sweger by the Office would have destroyed the intended purpose of Janchipraponvej, which is to provide a **clear** composition. Accordingly, no *prima facie* case of obviousness has been established.

In particular, Sweger uses amino-multicarboxylate starch derivatives as a thickener or emulsion stabilizer. See Sweger, Abstract. In fact, Sweger suggests that “the emulsions are the preferred vehicle” for its amino-multicarboxylate starch derivative containing cosmetic compositions. See *id.* col. 4, lines 39-41. However, as stated above, Janchipraponvej specifically teaches that its compositions have to be non-emulsified and clear. In view of Sweger’s teaching as whole, one of the skilled in the art would not have had any reason or motivation to take Sweger’s amino-multicarboxylate starch derivatives, an ingredient that is taught by Sweger to be **preferably used in**

emulsions, and use it in Janchipraponvej's non-emulsified composition. To the contrary, a skilled artisan would have been discouraged to do so.

Indeed, the Office has failed to provide any reason why a skilled artisan would have specifically picked Sweger's multicarboxylate starch derivatives among many other thickeners known in the art and added it into Janchipraponvej's composition as a thickener.

Furthermore, even if, solely for the purpose of argument, Sweger's amino-multicarboxylate starch derivatives were used as a thickener for Janchiproponvej's hair composition, as shown in Mme. MAHE's November 24, 2003, Rule 1.132 Declaration ("Mahe 2003 Declaration "), such combination in fact destroys Janchipraponvej's intended purpose. See Mahe 2003 Declaration. "[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." M.P.E.P. § 2143.01 V. For that additional reason, the combination proposed by the Office does not support a *prima facie* case of obviousness.

Specifically, in Mahe 2003 Declaration, a hair composition according to Janchipraponvej's Example 25 was made and shown to be a clear composition. However, when 0.1% of CEPA -starch was added to this composition, a cloudy composition was resulted. The test result demonstrates that the addition of CEPA -starch destroys Janchipraponvej's intended purpose of having a non-emulsified, **clear** hair-conditioning composition.

Therefore, to follow Janchipraponvej's teaching, a CEPA-starch solution, such as the one suggested by Sweger, should not be added to the composition because it would

lead to a cloudy and not a clear hair composition. This conclusion is further supported in Janchipraponvej's specification, which is completely silent about using modified starches, such as Swager's multicarboxylate starch derivatives, as thickeners. The Janchipraponvej document is also, of course, silent regarding adding anything to destroy the clear solution

Accordingly, since Sweger's multicarboxylate starch derivatives would have destroyed Janchipraponvej's intended purpose, the Office has made no *prima facie* case of obviousness.

The Office relies on Martino for its teaching of alkyl ether sulfate salts and relies on Uchiyama for its broad teaching of anionic surfactant and conditioning agent. However, none of these cited references cure the deficiencies of the combination of Janchipraponvej and Sweger.

For the reasons of record and the foregoing remarks, the cited combination of references fail to establish *prima facie* case of obviousness and thus, Applicants respectfully request the withdrawal of this rejection.

III. Conclusion

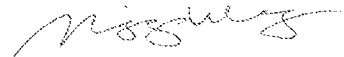
In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: April 8, 2009

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